

TIME OUT! #5 **STOP THE COAL RUSH.**

Texans Deserve *Clean* Energy Solutions



Sunday, February 11
3:00 pm RALLY
South Steps
State Capitol, Austin

Mission: To ask Texas State Legislators to intervene in the unfair permitting process of 19 dirty coal-fired power plants proposed in Texas. Lawmakers should stop the "fast-track" process so Texans can have a real voice in the crucial decisions about how we will power our state for generations to come. *Your participation is vital.*

Bring your friends, family, and neighbors to the Rally Feb. 11!

Lobby Day follows on Monday, February 12.

Write, Fax or Visit your Texas State Legislator and ask for a moratorium on dirty coal permits (House Concurrent Resolution, HCR 43).

For more information, to register, make a contribution, or volunteer -

<http://www.stopthecoalrush.com> or phone 512-476-2052.

The Coal Rush

Background Info.

A small number of large power companies, including giant TXU, want to build **19 new, dirty coal-fired power plants** in Texas. Governor Perry issued an executive order in 2005 directing Texas' environmental agency to rush the proposed plants through the state permitting process making it more difficult for citizens to intervene.

(continued on reverse)

Clean Energy Solutions

Energy Efficiency & Renewables

We can eliminate the need for new dirty, coal plants by implementing currently available energy efficiency technologies on a systematic basis across all sectors -- governmental, commercial, industrial, educational, and residential. Some examples

- Energy Efficient construction materials and methods -- 'zero net energy' buildings,
- Energy efficient industrial equipment and home appliances,
- Programmable thermostats and a 'smart' grid,
- Compact fluorescent lightbulbs,

We cannot afford to revert to burning coal, a 19th century solution, especially when these energy efficiency measures are available now.

Coal Rush (continued)

Citizens in areas where the proposed plants would be built have been trying to stop the "fast-track" process all year. Elected officials from over 30 communities in Texas including mayors of Dallas and Houston are also protesting because our air quality will suffer from the new emissions. Environmental groups and business community leaders have filed lawsuits to stop the plants.

Texas is the last place in the world that should be building new coal-fired power plants. Texas air is already so polluted that more than half of Texans live in areas where the air fails to meet federal minimum health-based standards.

The Austin area is barely within attainment of those standards. Our region has struggled in recent years to decrease air pollution to comply with the Federal ozone standard. Those efforts would be seriously threatened by two, already permitted new plants - one in San Antonio and one in Riesel near Waco, plus three other units planned for Waco and the dirty, old-style coal plant TXU.

Clean Energy (continued)

Texas has more renewable energy potential than any other state in the country. Last year, we became number one in the nation for production of electricity from wind power and we have ample sun resource for solar power generation. Scientists have demonstrated that solar plants can be built at costs comparable to coal plants and new schemes for renting solar technology are becoming available to power your home with clean energy and without the high cost up front. Innovative solar technologies which can wrap industrial parks and power those facilities are being marketed in Austin to industrial building supply companies. Texas' renewable energy sources could provide enough power to meet 40 percent of U.S. demand if the Legislative and business sectors - and citizens such as you and me would accelerate the

proposes to build northeast of Austin near Rockdale and the many other plants TXU and other companies want to build. **If these plants are built, their emissions would pose serious health and quality of life issues to Central Texans and would contribute significantly to Global Warming.**

Annual Air Emissions POLLUTION from 19 Proposed Additional Coal-fired Power Plants in Texas ► Health & Environmental Impacts ◀

Regulated Pollutant	Amount	Key Health & Environmental Impacts
SO₂ Sulfur Dioxide	73,157 tons	Makes fine particles and acid rain, contributes to breathing problems, asthma and aggravates heart and lung disease
NO_x Nitrogen Oxide	33,546 tons	Smog, makes people susceptible to lung tissue damage and reduces lung function
PM Particulate Matter	22,116 tons	Causes respiratory illness and reduces average life expectancy
Hg Mercury	4,415 pounds	A dangerous neurotoxin. 1 gram can poison a 20 acre lake; Contaminates fish and leads to permanent brain damage in exposed children
Un-Regulated	Amount	Key Health & Environmental Impacts
CO₂ Carbon Dioxide	124.5 Million Tons	Principal Greenhouse Gas, contributes to Global Warming

Endorsing Organizations

Time Out! Stop the Coal Rush RALLY & Lobby Day

American Lung Association of the Central States, Austin Physicians for Social Responsibility, Blue Skies Alliance (Dallas), Citizens Environmental Coalition (Houston), Citizens for Environmental Cleanup (Fairfield), Cool Planet (Tyler), Communities Organizing for Resources and the Environment (Bonham), East Texas Environmental Concerns Organization (Athens), Greater Caddo Lake Association, Green Girls (Austin), Happy Living with Justice (Austin), Keep Waco Green, Public Citizen, Robertson County Our Land, Our Lives, SEED Coalition, Sustainable Energy and Economic Development Coalition, Sierra Club - Lone Star Chapter and Regional Groups - Alamo, Austin, Coastal Bend, Big Bend, Dallas, Fort Worth, Golden Triangle, Houston, Lower Rio Grande Valley, Pineywoods, Texans for Public Justice, Texas Campaign for the Environment, Texas Center for Policy Studies, Texas Clean Water Action, Texas IMPACT - People of Faith Working for Justice, TPOWER

MORE INFO <http://www.stopthecoalrush.com> or 512-476-2052



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Sierra Club, Renewable Energy Experts Unveil Groundbreaking Report

Roadmap Details Plan for Tackling U.S. Global Warming Emissions by 2050 Using Energy Efficiency, Renewable Energy Alone

(Washington, DC)- Today on Capitol Hill the Sierra Club joined with the American Solar Energy Society (ASES), key Congressional chairmen and representatives, and the nation's preeminent climate scientist to unveil a new report authored by ASES that lays out a plan for dramatically reducing the nation's global warming emissions. The roadmap--now the official Sierra Club global warming strategy--details how an aggressive, yet achievable increase in the use of energy efficiency and renewables alone can achieve a 60-80% reduction in U.S. global warming emissions by 2050.

"This report moves the discussion from whether we can achieve the necessary reductions in global warming pollution with energy efficiency and renewable energy in this country to exactly how we should do it," said Carl Pope, Sierra Club Executive Director. "Fully three-quarters of the reductions in global warming pollution called for by Dr. Hansen and other scientists can be realized using energy efficiency, wind, and solar--all technologies we have today. The rest can be made with geothermal, biofuels, biomass, and other renewables. We already have the best, cheapest, and cleanest solutions at our disposal; now we just need the market and our political leaders to put them to work."

Climate scientists agree that in order to prevent the most catastrophic effects of global warming we need to halt the growth of our emissions immediately and begin reducing them within the decade. The peer-reviewed report, "Tackling Climate Change in the U.S.," is authored by scientists from the American Solar Energy Society, many of whom are employed by our nation's national research laboratories. It identifies the renewable energy resources available across the U.S. that can be used to transition away from the dirty, fossil fuel-based energy economy of yesterday toward the clean energy technologies that will fuel the economy of tomorrow. The report brings together detailed analyses of various smart energy solutions, including energy efficiency solar (both photovoltaic and concentrating), wind, biofuels, biomass, and geothermal.

"This roadmap gives us both a destination--60-80% emissions reductions by 2050--and a plan for how to get there using the best smart energy solutions like efficiency and renewables," said Dave Hamilton, Director of the Sierra Club's Global Warming and Energy Program. "Dollar for dollar, these clean energy solutions are the best choices for America. There is no reason to invest tens of billions more in the outdated, environmentally and economically irresponsible technologies of yesterday like coal and nuclear when we can have efficient, clean energy at a reasonable cost. If we want to build a new energy economy based on clean energy and new, good-paying manufacturing jobs, this is the road to get there."



Key findings of the report:

- We can reduce carbon emissions by 1,100-1,200 million metric tons annually by 2030 with aggressive deployment of energy efficiency and renewable energy alone;
- 82% of necessary reductions in carbon emissions can come from wind, solar, and increased energy efficiency. Biomass, biofuels, and geothermal could comprise the rest;
- This plan would achieve the U.S. share of reductions required to stabilize atmospheric CO2 levels at 450-500 parts per million and limit additional average temperature rise to 1°C above 2000 levels.

The report was unveiled at a Capitol Hill event featuring Rep. Henry Waxman, Chairman of the House Government Reform and Oversight Committee; Sen. Jeff Bingaman, Chairman of the Senate Energy Committee; Rep. Christopher Shays; preeminent NASA climate scientist James Hansen; Carl Pope; Dr. Chuck Kutcher, ASES member, renewable energy researcher and editor of the report; and Brad Collins, ASES executive director.

Contact Josh Dorner for hard copies of the report and reproductions of the key maps and charts from the report, as featured at the news conference.

The full report can be downloaded at:

<http://www.ases.org/climatechange/>

For Texas implications, phone Donna Hoffman, 512-477-1729 or 512-299-5776 cell, donna.hoffman@sierraclub.org or Neil Carman, PhD, 512-472-1767

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Tackling Climate Change in the U.S.

**Potential Carbon Emissions
Reductions from Energy
Efficiency and Renewable Energy
by 2030**

Executive Summary

Charles F. Kutscher, Ph.D., P.E.
American Solar Energy Society

Energy efficiency and renewable energy technologies have the potential to provide most, if not all, of the U.S. carbon emissions reductions that will be needed to help limit the atmospheric concentration of carbon dioxide to 450 – 500 ppm.

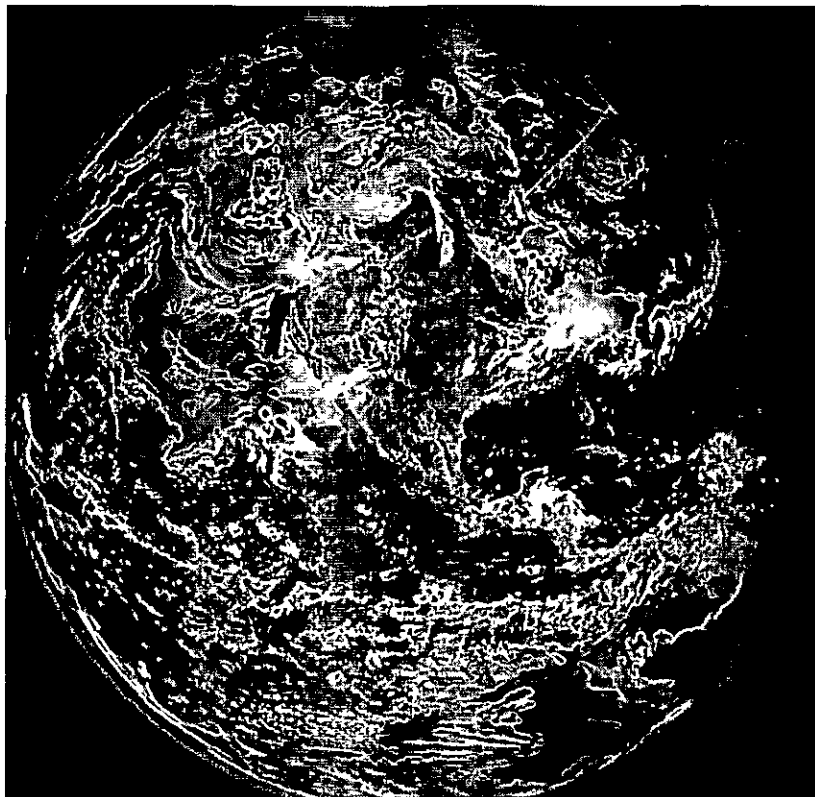


Photo Courtesy NASA

□ □ □ For SOLAR 2006, its 35th annual national solar energy conference last July, the American Solar Energy Society (ASES) chose to address global warming, the most pressing challenge of our time. Under the theme "Renewable Energy: Key to Climate Recovery," climate experts James Hansen of the National Aeronautics and Space Administration (NASA), Warren Washington of the National Center for Atmospheric Research (NCAR), Robert Socolow of Princeton University, and Marty Hoffert of New York University (NYU) described the magnitude of the global warming crisis and what is needed to address it.

A key feature of the conference was a special track of nine invited presentations by experts in energy efficiency and renewable energy that detailed the potential for these technologies—in an aggressive but achievable climate-driven scenario—to address the needed U.S. carbon emissions reductions by the years 2015 and 2030. These presentations covered energy efficiency in buildings, industry, and transportation, as well as the following renewable technologies: concentrating solar power, photovoltaics, wind, biomass, biofuels, and geothermal. Since the conference, these studies were subjected to additional review and were revised for publication in this special ASES report.

According to Hansen, NASA's top climate scientist, we need to limit the additional average world temperature rise due to greenhouse gases to 1°C above the year-2000 level. If we fail, we risk entering an unprecedented warming era that would have disastrous consequences, including rising sea levels and large-scale extinction of species. Limiting temperature rise means limiting the carbon dioxide (CO₂) level in the atmosphere to 450–500 parts per million (ppm).

What does this mean for the United States? Estimates are that industrialized nations must reduce emissions about 60–80 percent below today's values by mid-century. Figure 1 shows the U.S. reductions that would be needed by

2030 to be on the right path. Accounting for expected economic growth and associated increases in carbon emissions in a business-as-usual (BAU) case, in 2030 we must be offsetting between 1,100 and 1,300 million metric tons of carbon per year (MtC/yr).

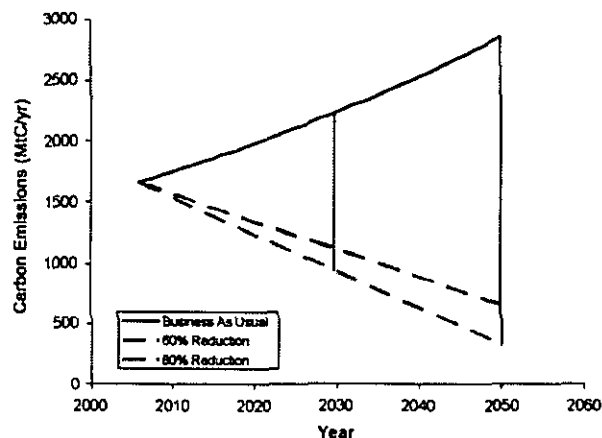


Figure 1 Triangle of U.S. fossil fuel carbon reductions needed by 2030 for a 60% to 80% reduction from today's levels by 2050.

The SOLAR 2006 exercise looked at energy efficiency and renewable energy technologies to determine the potential carbon reduction for each. The authors of the renewable technology papers were asked to describe the resource, discuss current and expected future costs, and develop supply and carbon-reduction curves for the years 2015 and 2030.

Table 1 summarizes the potential carbon-offset contributions from the various areas (Energy efficiency contributions in the buildings, transportation, and industry sectors are combined into one number.) Figure 2 shows all the contributions on one graph. Approximately 57 percent of the total carbon-reduction contribution is from energy efficiency (EE) and about 43 percent is from renewables. Energy efficiency measures can allow U.S. carbon emissions to remain about level through 2030, whereas the renewable supply technologies can provide large reductions in carbon emissions below current values.

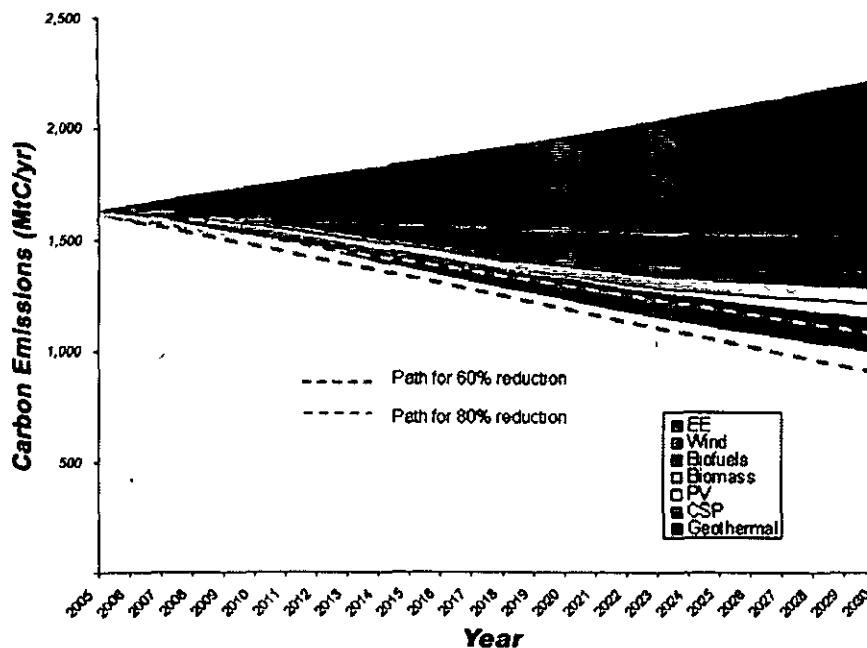


Figure 2 Carbon offset contributions in 2030 from energy efficiency and renewable technologies and paths to achieve reductions of 60% and 80% below today's emissions value by 2050.

Table 1

Carbon offset contributions (in MtC/yr in 2030) based on the middle of the range of carbon conversions

Energy efficiency	688
Concentrating solar power	63
Photovoltaics	63
Wind	181
Biofuels	58
Biomass	75
Geothermal	83

The U.S. is extremely rich in renewable energy resources. Figure 3 shows how the various potential renewable contributions in 2030 are distributed throughout the country.

The carbon-offset contributions for the year

2030 total between 1,000 and 1,400 MtC/yr, or an average of about 1,200 MtC/yr based on a mid-range value for electricity-to-carbon conversion. This would put the U.S. on target to achieve the necessary carbon-emissions reductions by mid-century. A national commitment that includes effective policy measures and continued research and development will be needed to fully realize these potentials. Integration of these technologies in the marketplace could reduce these numbers somewhat due to competition and overlap in some U.S. regions. On the other hand, even greater wind and solar contributions might be possible through greater use of storage and high-efficiency transmission lines.

The studies focused on the use of renewable energy in the electricity and transportation sectors, as these together are responsible for nearly three-quarters of U.S. carbon emissions from fossil fuels. Goals for renewables are often stat-

ed in terms of a percentage of national energy. The results of these studies show that renewable energy has the potential to provide approximately 40 percent of the U.S. electric need projected for 2030 by the Energy Information Administration (EIA). After we reduce the EIA electricity projection by taking advantage of energy efficiency measures, renewables could provide about 50 percent of the remaining 2030 U.S. electric need.

There are uncertainties associated with the values estimated in the papers, and, because these were primarily individual technology studies, there is some uncertainty associated with combining them. The results strongly suggest, how-

ever, that energy efficiency and renewable energy technologies have the potential to provide most, if not all, of the U.S. carbon emissions reductions that will be needed to help limit the atmospheric concentration of carbon dioxide to 450 – 500 ppm.

We hope this work will convince policymakers to seriously consider the contributions of energy efficiency and renewable technologies for addressing global warming. Because global warming is an environmental crisis of enormous magnitude, we cannot afford to wait any longer to drastically reduce carbon emissions. Energy efficiency and renewable technologies can begin to be deployed on a large scale today to tackle this critical challenge.

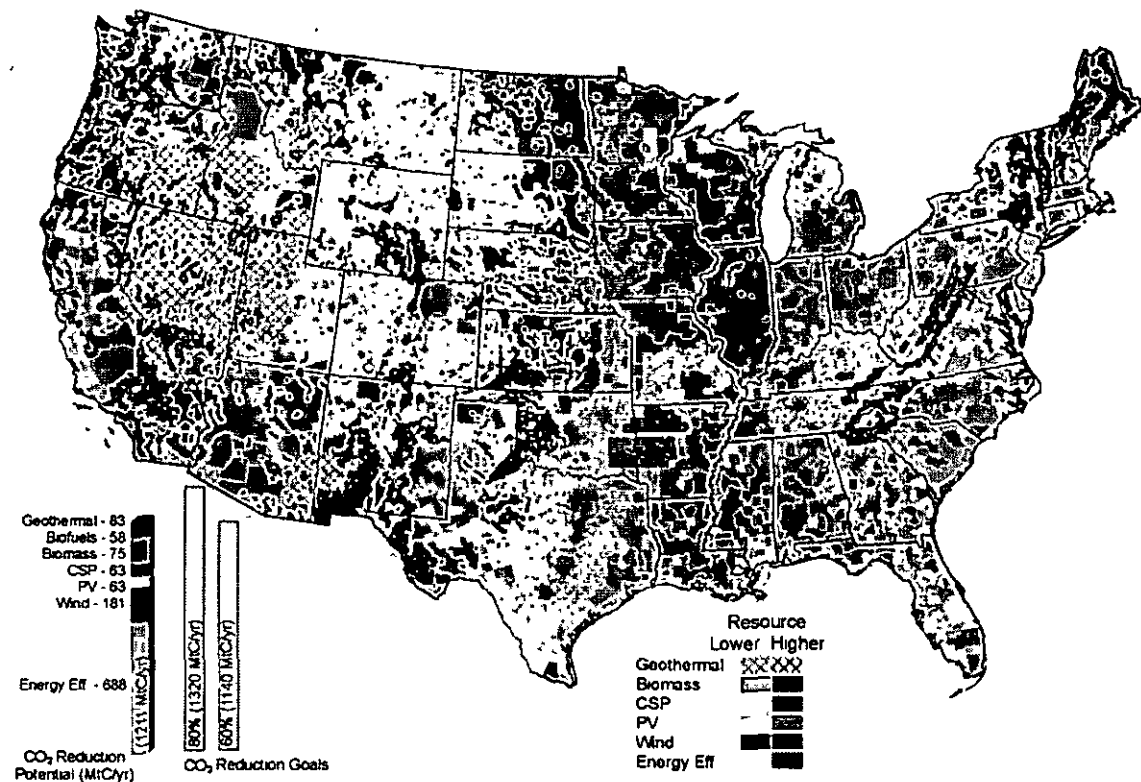


Figure 3 U S map indicating the potential contributions from energy efficiency and renewable energy by 2030

